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Notice of Allowability

Application No.

10/064,287

Examiner

Faruk Hamza

Applicant(s)

BANTZ ET AL.

Art Unit

2155

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 07/12/05.
2. ☒ The allowed claim(s) is/are 3-5 and 11-13 renumbered as 1-6.
3. ☒ The drawings filed on 28 June 2002 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 20050819.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

Bharat Barot
BHARAT BAROT
PRIMARY EXAMINER

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.
2. Authorization for this examiner's amendment was given in a telephone interview with attorney of record Jeanine Ray on August 19, 2005.
3. The application has been amended as follows:

In the claims:

Claims 1 and 2 are canceled.

3 (Currently amended). ~~A method comprising:~~ In a computer network including at least two workstations and implementing a grid for executing a grid workload on shared resources of at least two workstations, a method of assigning said grid workload to one of the at least two workstations, the method comprising:

connecting a plurality of workstations in a network each workstation having available resources which are shared with other workstations across the network;

implementing a grid across the network;

executing grid workload on the resources which are shared among the plurality of workstations;

determining an activity state of a first workstation included in the grid, the activity state being indicative of a degree of current utilization of the first workstation by a local workload;

responding to a determination that the activity state of the first workstation indicates low utilization by assigning grid workload to the first workstation;

responding to a determination that the activity state of the first workstation indicates high utilization by determining a workstation preference for accepting grid workload on the first workstation when utilization is determined to be high;

responding to a determination that the workstation preference is yes by determining a delay level associated with the grid workload and indicative of an extent to which the grid workload will lock the resources of a workstation to which it the grid workload is assigned; and

responding to a determination that the activity state indicates high utilization and that the workstation preference is yes by assigning the grid workload to the first workstation only if the delay level indicates that the grid workload will lock the workstation resources to an extent below a threshold.

4 (Currently amended). ~~A method comprising:~~ In a computer network including at least two workstations and implementing a grid for executing a grid workload on shared resources of at least two workstations, a method of assigning said grid workload to one of the at least two workstations, the method comprising:

connecting a plurality of workstations in a network, each workstation having available resources which are shared with other workstations across the network;

implementing a grid across the network;

executing grid workload on the resources which are shared among the plurality of workstations;

monitoring a utilization level indicative of the extent to which a local workload is utilizing the resources of a first workstation and setting a first workstation activity state to a selected one of three conditions;

a first condition being idle if the utilization level is below a first threshold;

a second condition being active if the utilization level is above the first threshold and the first workstation activity level is already idle or active; and

a third condition being blocked if the utilization level is above

the first threshold and the first workstation activity state is already blocked; and

checking the first workstation activity state;

in response to a first workstation activity state of idle, assigning grid workload to the first workstation;

in response to a first workstation activity state of active, determining a first workstation preference for accepting grid workload when the first workstation activity state is active;

in response to a determination that the first workstation preference is yes, assigning grid workload to the first workstation; in response to a determination that the first workstation preference is no;

setting the first workstation activity state to blocked; and

holding grid workload for assignment to another workstation;

and

in response to a first workstation activity state of blocked, holding grid workload for assignment to another workstation.

5 (Currently amended). The method of Claim 4, further comprising:

determining a delay level associated with grid workload and indicative of the extent to which grid workload will lock the

resources of a workstation to which it the grid workload is assigned; and

in response to a first workstation activity state of active and a first workstation preference of yes, assigning grid workload to the first workstation only if the delay level indicates that the grid workload will lock the workstation resources to an extent below a second threshold.

Claims 9 and 10 are canceled.

11 (Currently amended). ~~Apparatus comprising:~~ In a computer network including at least two workstations and implementing a grid for executing a grid workload on shared resources of at least two workstations, a system for assigning said grid workload to one of the at least two workstations, the system comprising:

a plurality of workstations connected together in a network, each workstation having available resources which are shared with other workstations across the network;

computer executable instructions stored accessibly to and executing on said plurality of workstations which, when executing, implement a grid across the network and execute grid workload

on the resources which are shared among the plurality of workstations;

a workstation monitor operatively associated with said workstations which determines

(a) an activity state of a first workstation, the activity state being indicative of a degree of current utilization of said first workstation by a local workload; and

(b) a workstation preference for accepting grid workload on said first workstation when utilization is high;

a grid workload monitor which determines a delay level associated with the grid workload and indicative of the extent to which the grid workload will lock the resources of a workstation to which the grid workload is assigned; and

a workstation scheduler which:

(c) in response to a determination that the activity state indicates low utilization of said first workstation assigns grid workload to said first workstation; or

(d) in response to a determination that the activity state indicates high utilization of said first workstation checks the workstation preference of said first workstation and in response to a workstation preference of yes, assigns the grid workload to said first workstation only if the delay level indicates that the grid

workload will lock the workstation resources to an extent below a threshold; or

(e) in response to a workstation preference of no holds the arid workload for assignment to another workstation.

12 (Currently amended). ~~Apparatus comprising:~~ In a computer network including at least two workstations and implementing a grid for executing a grid workload on shared resources of at least two workstations, a system for assigning said grid workload to one of the at least two workstations, the system comprising:

a plurality of workstations connected together in a network, each workstation having available resources which are shared with other workstations across the network;

computer executable instructions stored accessibly to and executing on said plurality of workstations which, when executing, implement a arid across the network and execute grid workload on the resources which are shared among the plurality of workstations;

a workstation monitor which

(a) monitors a utilization level indicative of the extent to which a local workload is utilizing the resources of a first workstation and sets a first workstation activity state to a selected one of three conditions;

a first condition being idle if the utilization level is below a first threshold;

a second condition being active if the utilization level is above the first threshold and the first workstation activity level is already idle or active; and

a third condition being blocked if the utilization level is above the first threshold and the first workstation activity state is already blocked; and

(b) determines a first workstation preference for accepting grid workload when said first workstation activity state is active; and

a workload scheduler which:

(c) checks said first workstation activity state;

(d) in response to a first workstation activity state of active, checks said first station preference;

(d1) in response to a first workstation preference of yes, assigns_grid workload to said first workstation;

(d2) in response to a first workstation preference of no:

(d2a) sets said first workstation activity to blocked;

(d2b) holds grid workload for assignment to another workstation; and

(e) in response to a first workstation activity state of blocked, holds grid workload for assignment to another workstation.

13 (Currently amended).The ~~apparatus~~ system of Claim 12, further comprising:

a grid workload monitor which determines a delay level associated with grid workload and indicative of the extent to which grid workload will lock the resources of a workstation to which grid workload is assigned, and wherein said workload scheduler, in response to a first workstation activity state of active and a first workstation preference of yes, assigns grid workload to said first workstation only if the delay level indicates that the grid workload will lock the workstation resources to an extent below a second threshold.

REASONS FOR ALLOWANCE

4. The following is an examiner's statement of reasons for allowance: Claims 3-5 and 11-13 are allowable over the prior art of record.

The examiner had found that the prior art of record does not teach or suggest or render obvious "A system and method for grid computing by sharing workstations across network. The major differences in the independent claims 3,4,11 and 12 are not found in the prior art of record that determining current

utilization level of a shared workstations and based on the determined level grid workloads are assigned. When workstation utilization is determined to be high the grid workload locks the assigned workstation.” as in claim 3,4,11 and 12.

5. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance or Examiner Amendment.”
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Faruk Hamza whose telephone number is 571-272-7969. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Saleh Najjar can be reached at 571-272-4006. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you

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have questions on access to the Private PAIR system, contact the Electronic
Business Center (EBC) at 886-217-9197 (toll -free).

Faruk Hamza

FH

Patent Examiner

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